



NPA/22/026

Dartmoor National Park Authority

10 June 2022

Dartmoor National Park Authority Climate Action Plan – Progress Update

Report of the Senior Policy Officer

Recommendation: That the Members note progress made on the Action Plan, and endorse projects identified to be continued and a review of the Action Plan to be completed in 2022/23

1 Introduction

1.1 In March 2020 Dartmoor National Park Authority (DNPA) produced and approved an organisational Climate Action Plan. The action plan is part of the Authority's response to its declaration of a climate emergency and establishes how the Authority as an organisation will seek to achieve its ambition to be carbon neutral against its scope 1 and 2 emissions by 2025.

1.2 This report provides Members with an update on:

- Emissions reporting within the Defra group
- progress against the climate action plan over the period 2021/22
- projects to be carried forward to a review of the Climate Action Plan
- the Authority's carbon footprint for the period 2020/21 and 2021/22

2 Monitoring emissions and target setting across the Defra group

Emissions Monitoring

2.1 Defra has completed its first assessment of emissions across the Defra group, including all National Park Authorities (NPAs), the Environment Agency, Forestry Commission and its other arm's length bodies. The exercise has provided further independent verification of DNPA's carbon footprint and provided some assurance that DNPA is a relatively small emitter within the group. The results can be seen in the Appendices

2.2 Taken as a whole the ten English NPAs (including the Broads Authority) represent just 1% of the Defra footprint. The study's median emissions per full time equivalent (FTE) across all organisations was 9tCO_{2e}/FTE, with the Forestry Commission being the largest emitter at 42tCO_{2e}/FTE and the South Downs National Park

Authority being the smallest at 2tCO₂e/FTE albeit with high uncertainty. DNPA achieved 4tCO₂e/FTE, but without significant emissions reporting for purchased goods and services.

- 2.3 The study provides a useful benchmarking exercise and highlights DNPA's very low emissions relative to other public-sector bodies.

Target-setting

- 2.4 Alongside carbon footprinting the Defra study explored how target-setting could in the future be set at the Defra level, with targets being delegated to sub-organisations in a variety of different ways. The Senior Policy Officer is contributing to Defra's action planning process which is being progressed later this year.
- 2.5 The study raised the issue that whilst organisations are now increasingly adopting net-zero targets, these targets often do not adhere to a common definition of carbon neutrality. The report recommends more ambitious target-setting to front load emission reductions in line with what the science indicates is needed, rather than offsetting emissions. The report suggests setting annual reduction targets for emissions, including some scope 3 emissions and only allowing a maximum 10% of emissions to be offset for carbon neutrality¹.
- 2.6 This approach is more restrictive than DNPA's current target to be carbon neutral by 2025, which only includes scope 1 and 2 emissions and allows for unlimited carbon offsetting provided this is twinned with significant investment in emissions reduction consistent with the energy hierarchy.
- 2.7 Whilst the approach proposed is not final, Members should be aware that our net zero target may need to shift in the future to be consistent with current scientific understanding and reporting across the Defra group. Notwithstanding this it is still hoped we will achieve our current 2025 target.

3 Progress on the DNPA Climate Action Plan

Learning from the COVID Pandemic

- 3.1 The Action Plan was approved shortly before the COVID pandemic and could not have foreseen the lifestyle changes lockdown restrictions brought. The COVID pandemic forced the Authority to invest and become capable of operating entirely digitally across many of its work streams, far quicker than was ever thought possible. DNPA departments now operate mostly paperless, video conferencing software is used daily to avoid unnecessary travel, and home working has become normal practice. Unfortunately, our formal public meetings have to be held face to face and there is no indication from the Government as to when they may amend legislation to allow such meetings to be held 'virtually' or 'traditionally'.
- 3.2 We have worked to retain low carbon behaviours as restrictions have eased, whilst allowing for increased office presence conducive with a healthy team-working environment. Post-COVID measures introduced to maintain emission reductions have included:

¹ Defra are exploring targets aligned with [Science Based Targets](http://www.sciencebasedtargets.org) - www.sciencebasedtargets.org

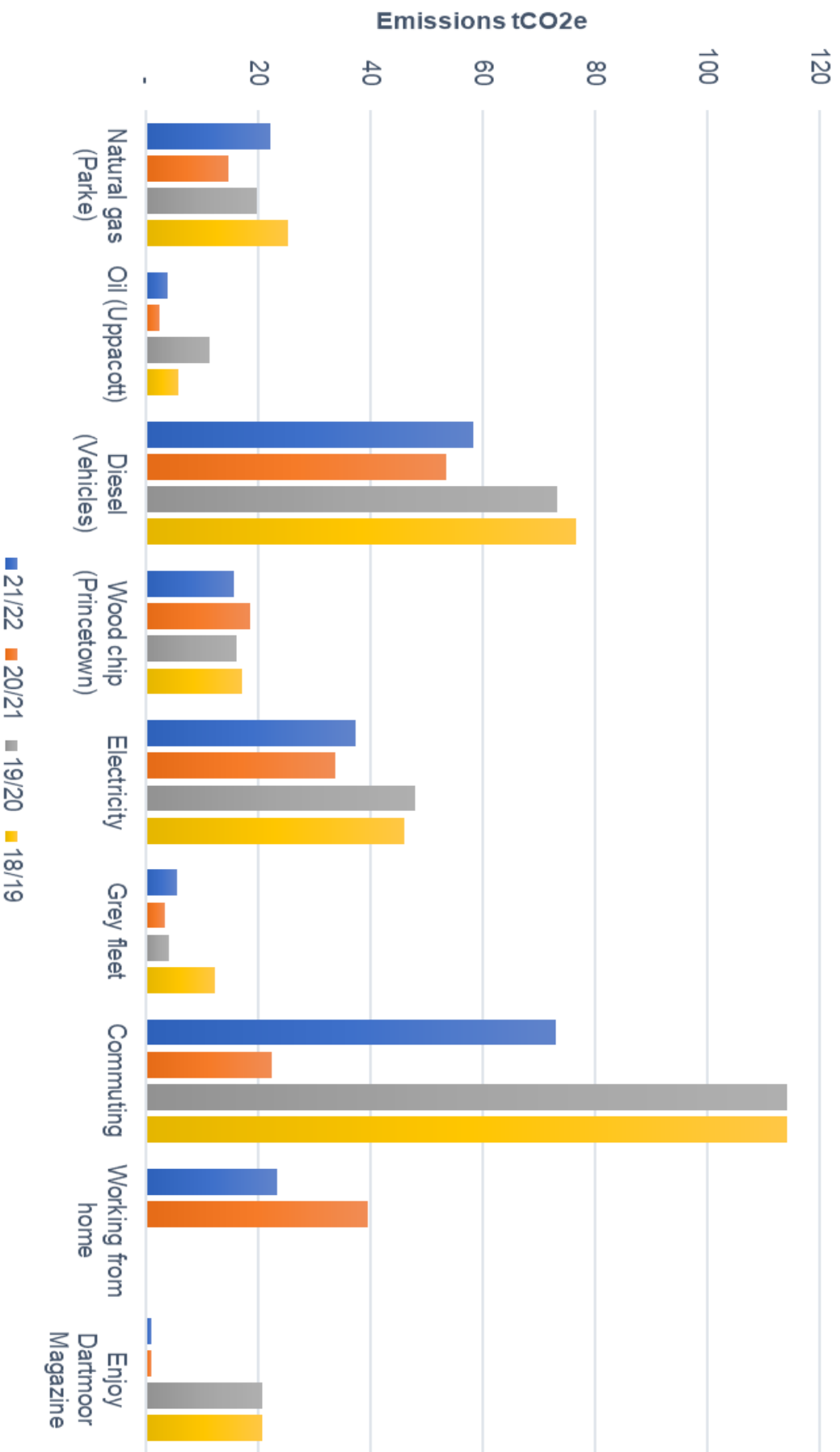
- A move to flexible working.
- Maintenance of paperless work processes across the Authority.
- Significant improvement and investment in remote working software and equipment, such as Microsoft Teams, cloud-based IT systems, and issuance of laptops, smartphones and tablets.
- Microsoft Teams training delivered to all staff.

3.3 These have gone a long way to ensuring emissions have not fully 'rebounded'. Figure 1 shows how key emitters on our footprint have varied between 2018/19 and 2021/22.

3.4 Annual monitoring against the action plan has now spanned 4 years of emissions data, allowing for trend analysis. During this time the climate action plan's impact can begin to be seen, although it should be noted that some of these reductions are still likely affected by the pandemic. Key overall trends between 2018/19 to 2021/22 include:

- 20% decrease in scope 1 and 2 emissions
- 26% decrease in overall emissions (excluding investments)
- 24% decrease in vehicle emissions
- 36% decrease in commuting emissions
- 95% decrease in emissions associated with the production of Enjoy Dartmoor (68.5% decrease excluding offsets)
- 48% reduction in internal printing emissions

Figure 1 - Trends in DNPA's key emissions 2018/19 to 2021/22



Commuting and home working emissions

- 3.5 As we move to a flexible working model it is important to ensure emissions related to staff working from home are reported within our footprint. This includes emissions associated with heating of homes and the electrical consumption of their home workstation, while they are working from home.
- 3.6 Collecting bespoke energy usage data from staff is not practical or feasible. DNPA have used EcoAct’s White Paper² to provide a consistent corporate methodology for estimating likely emissions. These estimations are based on national average heating systems; a gas central heating system, used for 10 hours per day, for 6 months of the year. A staff transport survey informed us how often all staff across the Authority work from home and this has been adjusted for the COVID lockdown periods, when it was assumed all staff were working from home.
- 3.7 The staff survey also took into consideration staff commuting patterns, as an update from that data collected in 2020. These patterns were based on current flexible work patterns and were also adjusted for the COVID lockdown periods when it was assumed staff were not commuting.
- 3.8 As with all Scope 3 emissions, there are challenges of data collection and measurement to overcome. However, we believe this to be a robust first step towards better understanding the full emissions impact of today’s operations.
- 3.9 The exercise demonstrates the clear benefit of home working. Table 1 shows how under current work arrangements the Authority’s working from home policy is effectively saving 24tCO₂e, or 10% of DNPA’s entire 2021/22 footprint. This reduction in our ‘carbon footprint’ also needs to be balanced against the need to ensure we maintain effective service provision, hence the ‘flexible working’ approach.

Table 1 – Commuting and home working emissions based on existing and theoretical working patterns

	Emissions tCO₂e		Total
	Commuting emissions	Home working emissions	
Current working patterns	97.44	15.27	112.71
Scenario: All staff commuting	136.74	0	136.74
Scenario: All staff home working	0	52.06	52.06

Update on Climate Action Plan projects

- 3.10 The following table provides a progress update on projects scheduled for implementation in 2021/22.

² [Homeworking emissions whitepaper, Ecoact \(2021\)](#)

Project	Update
1: Purchase more fuel efficient vehicles	<p>Procurement of 2 electric pool vehicles confirmed</p> <p>Emissions from DNPA vehicles in 2021/22 has reduced by 22% since monitoring against the action plan began in 2018/19. The COVID pandemic was the major cause of this, but early signs suggest emissions reductions are being maintained to a degree, with only a 10% emissions increase in 2021/22 from the low point in 2020/21.</p> <p>A Fleet Electrification Strategy has been prepared and approved by Leadership Team. This strategy appraises the suitability of DNPA's existing vehicle fleet for electrification and low-emission alternatives. This has led to testing and procurement of two electric pool vehicles, which will replace vehicles with combined annual emissions of approximately 4.5tCO_{2e}. Other electric vehicle procurement is being explored upon fleet redundancy, such as the Works Team van. It is hoped that the market will soon have a viable electric 4x4 utility vehicle capable of replacing our Ranger's Land Rover Defenders which produce 75% of total DNPA vehicle emissions.</p>
2: Promote travel alternatives	<p>Target achieved, ongoing maintenance required</p> <p>This project sought to encourage travel alternatives and work towards avoiding unnecessary staff travel, principally by raising awareness of video conferencing options and allowing flexibility for home-working in appropriate roles. The Action Plan sought to scope this project in 2020 and targeted a nominal 10% emission reduction for DNPA vehicles before 2025.</p> <p>All staff have now been trained with Microsoft Teams conferencing and are able to work from home. 22% emission savings have been achieved by all DNPA vehicles between 2018/19 and 2021/22.</p> <p>Procurement of electric vehicles will reduce emissions further, especially if twinned with renewable energy purchase.</p>
4: Purchase electric land management equipment	<p>Not progressed</p> <p>DNPA's petrol use has declined significantly to only 15L in 2021/22. Investment in electric equipment is therefore not justified in view of only very small potential emission savings.</p>

5: Purchase renewable energy	<p>Progressing with Devon County Council</p> <p>This project seeks to secure renewable energy to enable DNPA to offset electricity emissions, currently 30% of Scope 1 and 2 emissions. DNPA have been seeking to do this via a synthetic power purchase agreement with Devon County Council, this approach ensures the purchase of renewable energy directly supports the creation of new renewable energy infrastructure.</p> <p>DCC's synthetic PPA project has experienced significant delays related to COVID and recent instability in the energy markets. These delays are mirrored by other providers in this area. DNPA are continuing to appraise options for securing genuine renewable energy,</p>
6: Solar PV @ Haytor VC	<p>Progressing</p> <p>The project is being progressed in 2022/23, quotes have been received and are being appraised alongside other budget constraints. This project will further enhance the benefits of the vehicle charging point installed at Haytor Visitor Centre.</p>
7: Audit of high demand electrical items	<p>In progress</p> <p>This project sought to review all electrical items rated over 1kW and determine whether these are necessary or can be replaced by more efficient alternatives. Limited IT capacity and flexible home working arrangement have meant this project has been undertaken on a case by case basis and will be continued into the future.</p>
8: Convert Parke electric shower to wet system	<p>Complete</p> <p>This project was completed in 2020/21.</p>
9/10: LED lighting Parke car park and Duchy Hotel	<p>Progressing</p> <p>This project sought to replace the lighting in the Parke Car Park with efficient LED alternatives. This project is being considered for implementation in 2022/23 alongside other budget constraints and staff capacity.</p> <p>LED lighting install at Duchy Hotel has not progressed because of how little these premises are used and limited associated emissions savings.</p>
11: Carbon footprint land assets	<p>Progressing</p> <p>Farm Carbon Toolkit have been appointed to assess land use emissions on DNPA's estate and determine the extent to which conservation of these assets results in sequestration that offsets our organisation's carbon emissions. The work involves assessing the carbon stock and annual carbon flows of our common land and woodland holdings. Importantly the project will progress our understanding of how carbon is stored in open habitats common on Dartmoor's moorland more generally.</p>

	<p>These, generally acid grassland habitats, are not currently well understood in carbon terms and there is no standard carbon assessment methodology. The project is making innovative use of SWEEP's remote sensed habitat classification data and soil information to develop a proportionate sampling methodology.</p> <p>The results will be of significant benefit beyond DNPA's land ownership and will help inform future assessments as well as moorland management decisions.</p> <p>The project is scheduled to report in October 2022, with the option to extend this to explore a number of current knowledge gaps:</p> <ul style="list-style-type: none"> • Modelled sequestration change in defined management scenarios • Carbon losses associated with swaling • Above ground carbon storage of bracken, European gorse, rush and tussocky under-grazed pasture • Carbon sequestration of Molinia grassland on peatland
12: Investments	<p>Complete, ongoing review</p> <p>This project sought to understand the carbon emissions associated with DNPA's pension fund investments.</p> <p>The Devon County Council Investment and Pension Fund Committee commissioned a carbon footprint analysis of the Devon Pension Fund's investments, to be published annually. This footprint provides the basis for Dartmoor to understand the likely emissions from its pension investments. The study found that the fund had a weighted average carbon intensity of 332 tCO₂e / £m, which is 29 tCO₂e below a benchmark calculated on the average for businesses operating in the areas the fund is invested in. This means that emissions associated with our investments are about 9% lower than the averages for the areas we are invested in. As a helpful comparison, using the DNPA carbon footprint and DEFRA grant, we could say that DNPA has a carbon intensity of 85.1 tCO₂e / £m.</p> <p>The value of DNPA's Assets held in the Devon LGPS as at 31 March 2021 was £19.441 million, representing 1% of the Devon Fund. We therefore estimated the annual emissions associated with our pension investments is in the region of 6,454 tCO₂e, approximately 22 times DNPA's annual footprint. A second and updated footprint is due to be reported in June 2022, at which point we will update this figure</p> <p>The Devon Pension Fund's current strategy is set out in their climate change policy³. Their strategy is always under review, but doesn't necessarily involve divestment where they are</p>

³ <https://www.brunelpensionpartnership.org/wp-content/uploads/2020/01/Brunel-Climate-Change-Policy-rev01.pdf>

	<p>confident engagement is leading to change⁴. The Brunel Partnership holds approximately £30bn of investment and so has significant voting powers to influence change and indeed transferring the Devon Fund to Brunel delivered significant emission savings of 21.5% between March and December 2019.</p> <p>The Devon Fund's updated footprint, due in June 2022, will reveal whether Brunel are achieving the ambition of reducing the fund's footprint by 7% year on year between 2021 and 2023.</p>
13: Carbon footprint of purchased goods and services	<p>Progressing with Devon County Council</p> <p>DNPA's procurement processes are led by Devon County Council (DCC). DNPA are working with Devon County Council to develop a means to accurately carbon footprint procured goods and services through this process, and use this information alongside other indicators to make procurement decisions. This area is the largest source of uncertainty in the Authority's footprint, it is also highly complex and has the potential to interfere with competition amongst smaller businesses. This project will be a priority for the next Action Plan.</p>
14: Digital by default	<p>Target achieved, on-going maintenance required</p> <p>The COVID pandemic response delivered, against the 2018/19 baseline, a 67% reduction in printing emissions in 2020/21. This has been broadly maintained with a 51% emissions reduction against the baseline being maintained in 2021/22.</p>
15: Encourage sustainable commuting	<p>Corporate working from home policy introduced, watching brief on other projects</p> <p>This project sought to encourage more sustainable commuting patterns, including by improving facilities and introducing a corporate working from home policy.</p> <p>COVID lockdowns caused a precipitous fall in staff commuting. The introduction of a corporate working from home policy has meant this emissions reduction has only partly rebounded and significant emission savings have been captured. As discussed earlier in this report, the data gathering exercise as part of the most recent footprinting exercise shows the benefit of home working over commuting, given DNPA's rural office setting.</p> <p>When there is more certainty over future working patterns DNPA will be considering implementing the following projects:</p> <ul style="list-style-type: none"> • Improve shower and changing facilities • Install one or more EV charging point(s) for staff use • Improve cycle storage

⁴ <https://www.room151.co.uk/interviews/sponsored-investment-roundtable-climate-and-the-igps/>

<p>16: Review procurement strategy for Visitor Centres</p>	<p>In progress</p> <p>The Visitor Centre team are in the process of producing a sustainable procurement strategy and looking to incorporate this into DNPA's Retail Strategy. The Strategy looks to make material progress in improving the Centre's retail offer and procurement processes. The Strategy includes working with suppliers to reduce product emissions, procuring products with excellent product life and which promote sustainable consumer behaviours, reducing packaging and plastic and sourcing locally to help foster a local circular economy.</p>
<p>18: Enjoy Dartmoor Magazine Distribution Strategy</p>	<p>Completed</p> <p>This project targeted a 50% reduction in emissions associated with the production of Enjoy Dartmoor.</p> <p>The magazine format was reviewed in 2020/21 and the decision made to reduce the size of the publication from A4 to B5, reduce paper weight from 100gsm to 90gsm, and the distribution volume from 100,000 to 50,000 copies. The overall impact of this has been to reduce the absolute footprint of the magazine from 20.8tCO_{2e} to 6.5tCO_{2e} (69%). The printing contractor has further offset emissions to reduce overall emissions to 1tCO_{2e}.</p>
<p>19: Behaviour change campaign</p>	<p>Complete, review and carry forward</p> <p>This project sought to raise awareness of the impact of DNPA and how this can be reduced by actions from staff. Including, driving to meetings, commuting, switching off equipment, printing, heating controls (turning down heating, shutting windows, shutting doors etc.), reducing overnight consumption, and procurement.</p> <p>This project's emissions targets have been exceeded, but there remains many areas that could be improved. It is recommended this project is reviewed and carried forward into the next Action Plan.</p>

4 Review of Climate Action Plan

- 4.1 The Climate Action Plan has now run its course and its included projects have been completed or are progressing towards completion. The Action Plan is now due to be reviewed in late 2022, in sequence with any action planning work undertaken by Defra. This exercise will review all existing projects, carry forward any outstanding projects and explore a new suite of projects for the Authority to deliver up to 2025. The format of the review process is to be agreed with Leadership Team later this year.
- 4.2 To begin this process DNPA held a frank and open discussion with staff about what bold action the Authority could take in the future to tackle emissions. Recognising that it will become harder and harder to continue reducing emissions in future years, especially

given the Authority's fixed grant funding settlement with Defra which means a significant real terms cut to our core funding.

4.3 The discussion was broad, but included following the points which will help inform the Action Plan review:

- Accelerating the shift towards electric vehicles (NB action reported above)
- Better understanding our procurement emissions throughout the Authority
- Being more pro-active with installation of micro-generation technology
- The future of working at Parke given emphasis on homeworking and need for energy efficient premises
- Better integrating Action Plan targets within corporate work programmes
- Being pragmatic with the role of offsetting
- Ensuring internal project funding is climate justified
- Improve environment impact reporting in internal governance processes

5 DNPA Carbon Footprint 2020/21 and 2021/22

5.1 The late publication of this annual update report has allowed for processing of two years carbon footprint data. The monitoring reports were previously reporting a year behind, this later reporting timeframe should allow more responsive footprint reporting to Members in the future. DNPA's updated carbon footprints for 2020/21 and 2021/22 are provided in Appendix I.

6 Other Climate Change related matters

Carbon Footprint of Dartmoor National Park (as a place) – Small World Consulting

6.1 It is included for Members awareness that work has commenced on producing a consumption-based carbon footprint for the National Park. This work is continuing in partnership with Natural England and National Parks England and is being rolled out across all UK National Parks and many AONBs.

6.2 Small World Consulting (SWC) first carried out a first consumption-based greenhouse gas assessment for the Lake District National Park (LDNP) in 2010. This project developed a consumption-based assessment approach, which includes a far broader range of emission categories than in a typical carbon footprint. Such as food, shopping, business supply chains, and travel by both residents and visitors to and from the Park.

6.3 Albeit still an emissions estimate, the SWC footprinting model has been developed significantly over the last decade and become far more sophisticated. It will become a valuable tool in understanding emissions across the National Park and informing how the Partnership Plan can guide partners in delivering meaningful emissions reductions across its focus areas. The final report should be available in July 2022.

7 Conclusion and Recommendations

7.1 DNPA have progressed well against its climate action plan in challenging circumstances, in many cases exceeding expectations.

DNPA's ability to meet its ambition of being carbon neutral against its scope 1 and 2 emissions will be particularly reliant on securing a renewable source of electricity, improving efficiency of DNPA's vehicle fleet and offsetting remaining unavoidable

- 7.2 emissions. Later this year we should know whether offsetting our organisational emissions will be possible on DNPA's existing land assets and whether this will be compatible with any emission saving targets delegated to us by Defra.
- 7.3 It is recommended that the Members note progress made on the Action Plan and endorse the continuation of outstanding projects identified and review of the Action Plan in 2022/23.

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2022 06 10 AG Climate Action Plan Update

Attachments: **Appendix 1 - DNPA's carbon footprint 2020/21 and 2021/22**
 Appendix 2 - 2019/20 Defra Carbon Footprint Results by organisation

DNPA's carbon footprint 2020/21

Emission source	Scope 1				Scope 2				Scope 3				Offset	Total
	Consumption	Unit	Emission factor kgCO ₂ e	tCO ₂ e	Consumption	Unit	Emission factor kgCO ₂ e/unit	tCO ₂ e	Consumption	Unit	Emission factor kgCO ₂ e	tCO ₂ e	tCO ₂ e	tCO ₂ e
Natural gas	70,906	kWh	0.18455	13.09					70,906	kWh	0.02391	1.70		14.78
Oil	928	L	2.54039	2.36					928	L	0.0513	0.05		2.41
Diesel	20,553	L	2.54603	52.33					20,553	L	0.05822	1.20		53.53
Petrol	41	L	2.16802	0.09					41	L	0.06318	0.00		0.09
Wood chip	210	tonnes	58.35272	12.25					210	tonnes	30.4	6.38		18.64
Electricity					132,543	kWh	0.23314	30.90	132,543	kWh	0.0217	2.88		33.78
Grey fleet									12,399	miles	0.26775	3.32		3.32
Water supply									910	m ³	0.344	0.31		0.31
Water treatment									819	m ³	0.708	0.58		0.58
Business travel flights									0	pax.km	0.28284	0		0
Business travel coach									0	pax.km	0.03435	0		0
Business travel rail									0	pax.km	0.04905	0		0
Commuting												22.41		22.41
Home Working												39.43		39.43
Enjoy Dartmoor Magazine												6.55	-5.54	1.01
Internal printing												0.53		0.53
Pension investments												6,454		6,454
Total	80.11				30.9				84.81				-5.54	6,644.81

DNPA's carbon footprint 2021/22

Emission source	Scope 1				Scope 2				Scope 3				Offset	Total
	Consumption	Unit	Emission factor kgCO ₂ e	tCO ₂ e	Consumption	Unit	Emission factor kgCO ₂ e/unit	tCO ₂ e	Consumption	Unit	Emission factor kgCO ₂ e	tCO ₂ e	tCO ₂ e	tCO ₂ e
Natural gas	103,032	kWh	0.18438	19					103,032	kWh	0.03135	3.23		22.23
Oil	1,500	L	2.54014	3.81					1,500	L	0.0513	0.08		3.89
Diesel	22,666	L	2.51233	56.94					22,666	L	0.0575	1.3		58.25
Petrol	15	L	2.19352	0.03					15	L	0.06425	0.001		0.03
Wood chip	180	tonnes	57.15269	10.29					180	tonnes	30.4	5.47		15.76
Electricity					163,394	kWh	0.21016	34.34	163,394	kWh	0.01879	3.07		37.41
Grey fleet									20,887	miles	0.26775	5.59		5.59
Water supply									1713	m ³	0.344	0.59		0.59
Water treatment									1541.7	m ³	0.708	1.09		1.09
Business travel flights									1,200	pax.km	0.28284	0.34		0.34
Business travel coach									0	pax.km	0.03435	0		-
Business travel rail									4,048	pax.km	0.04905	0.2		0.20
Commuting												73.08		73.08
Home Working												23.42		23.42
Enjoy Dartmoor Magazine												6.55	-5.54	1.01
Internal printing												0.77		0.77
Pension investments												6,454		6,454
Total	90.07				34.34				124.01				-5.54	6,697.66

2019/20 Defra Carbon Footprint Results by organisation

Organisation	Emissions tCO ₂ e
Environment Agency	279,353
DEFRA	148,449
Forestry Commission	43,330
Health Agency	34,496
The Royal Botanic Gardens Kew	20,756
Centre for Environment, Fisheries and Aquaculture Science	18,072
Agriculture and Horticulture Development Board	9,042
Natural England	8,592
Forest Research	5,852
Marine Management Organisation	5,449
Rural Payments Agency	5,304
Joint Nature Conservation Committee	2,764
The Water Service Regulation Authority	2,108
Veterinary Medicines Directorate	1,470
Sea Fish Industry Authority	1,284
North York Moors National Park Authority	1,151
Peak District National Park Authority	1,060
Lake District National Park Authority	1,013
Consumer Council for Water	829
Broads Authority	690
Exmoor National Park Authority	384
Yorkshire Dales National Park Authority	382
Dartmoor National Park Authority	336
NENNRs	321
Northumberland National Park Authority	320
National Forest Company	310
New Forest National Park Authority	299
South Downs National Park Authority	272
Drinking Water Inspectorate	191